State of California • Department of General Services •

Arnold **Schwarzenegger**, Governor

DIVISION OF THE STATE ARCHITECT

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DSA BULLETIN 06-03

Effective: May 1, 2008
Revised: April 4, 2008
Issued: Dec. 22, 2006

**To: DSA Staff and
           Interested Parties**

**From: Division of the State Architect
           Department of General Services
           State of California**

**SUBJECT: Plan Review Submittals for DSA Projects
           Electronic Files Submitted on CD
           Electronic Files Submitted to DSA FTP Site**

Background: In a letter dated October 26, 2006 to Community College & School District Facility Directors, Design Professionals and Construction Managers (see Appendix 5), the State Architect requested that all incoming applications provide an electronic file of the project plans & specifications along with the standard three sets of hardcopy (paper) plans, specifications, and documents. Receipt of documents in electronic form will allow DSA the flexibility of reviewing plans and specifications electronically. Electronic review will bring benefits of convenience to both DSA and clients. DSA will select projects for electronic review from among those submitted with electronic files.

Purpose: This bulletin provides specific requirements for the electronic portion of the submittal and describes part of DSA's procedures for electronic plan review and the architect's participation.

Revision: This document has been revised to incorporate requirements of DSA procedure PR 08-01, to update references.

1.   CLIENT SUBMITTAL:

Upon receipt of the submittal, the DSA Regional Manager, Intake Architect, and Supervisors will determine whether or not a submittal can be reviewed electronically. If they decide to do so, the Intake Architect or the Plan Review Supervisor will contact the Architect and ask permission to review the project electronically. If permission is not given, the project will be reviewed on the paper submittals received.

School districts and their architects have the option to submit applications in a completely electronic format, eliminating the need for sending paper documents, by submitting to DSA's file transfer protocol (FTP) server. Should this be their choice, they should call their local DSA Regional Office.

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2.   WORKFLOW: The following describes the workflow DSA and the architect of record shall follow during an electronic plan review.

2.1   Client Submittal: The Architect submits three sets of paper plans, specifications and documents, along with a CD of electronic files of the documents noted in Appendix 1, in the format described in Appendix 2:

2.1.1   Working Drawings shall be submitted as one electronic file, with bookmarks for each drawing.

2.1.2   Construction Manual and Specifications shall be submitted as one electronic file, with bookmarks for each specification section.

2.1.3   Structural Calculations shall be submitted as one electronic file with bookmarks for General, Gravity, Lateral, Foundation, and Miscellaneous calculations.

2.2   Electronic Review:

**2.2.1   For projects submitted in paper with an accompanying CD, if the project can be reviewed electronically, the Intake Architect or Plan Review Supervisor informs the Architect of Record that DSA's intends to do so. If the Architect consents, the paper sets will be recycled and the rest of this procedure applies. If the architect does not, the paper plans will be reviewed in the same manner as has been done in the past.

**2.2.2   The Structural Plan Reviewer contacts the architect to make arrangements for creation of a new folder on the DSA FTP site (if one does not exist). After it is created (or if it already exists) the Structural Plan Reviewer creates new folders on the DSA FTP site in conformance to the standard folder names (Appendix 3), for the purpose of transmitting check sets back to the architect and receiving corrected documents and responses for backcheck

2.2.3   The plan reviewers will copy the necessary documents and rename the files in conformance with the Standard File Naming System (Appendix 4), adding the sixth **"REVIEWER" term. The projects are reviewed in the proper order with other projects. Project review times are equivalent to paper projects.

2.2.4   At the end of the plan review, the reviewers upload their review files into the corresponding **"OUT' folder on the FTP site, and notify the architect that the review is ready for download and correction. The Supervisor or Lead may do this if no further comments or corrections are required at the end of their Final Review.

2.3   Resubmittal for Backcheck: When the architect and all consultants have corrected the plans:

2.3.1   The architect uploads *one* file of each of the corrected documents, to the "IN**" folder on the DSA FTP site using the Standard File Name System (Appendix 4). The Architect shall:

- Change the fifth **"version"** term to "02", and

- Remove the sixth **"reviewer"** term.

2.3.2   If the architect chooses, the DSA Review file, taken from the FTP **"OUT" folder, may be marked to explain the corrections made to the original drawings and specifications. This file should have a seventh term, the word: **"RESPONSE"** appended to the file name.

2.3.3   The architect informs the Structural Plan Reviewer that the project is ready for backcheck.

2.4   Backcheck:

2.4.1   The Structural Plan Reviewer downloads the files from the FTP site to the corresponding **"IN"** folder on DSA's plan review server, and notifies the other plan reviewers that the plans are ready for backcheck. The Structural Plan Reviewer schedules this time for them (as for a normal backcheck appointment) so that their time is committed to do the backcheck.

2.4.2   The reviewers compare the revised documents against the original comment sets. At the end of the backcheck, the reviewers call the Architect or Engineer to discuss the unresolved comments, and agree to the most expeditious means of resolving them. Web-conferencing software may be used. If further comments and corrections are required, another set is placed in the **"OUT"** folder in the Plan Review Folder, and the process iterates from **Step 2.3** above.

2.4.3   This review/response cycle continues until all comments and corrections have been resolved. This "resolution" must include the receipt and acceptance of the following

- A paper copy of the wet-signed Access, Gates, and Fire-Flow Approval drawings.

- A single, complete, properly marked and ordered PDF of the Fire Alarm Component Submittal.

- Revised, amended, Geotechnical and Geohazard Reports, as needed for inclusion of CGS comments, and an acceptance letter from CGS.

- Revised, amended Title 24 Energy reports and calculations.

- A completed form DSA-145 "Record Sets Handling Instructions"

2.5   Identification of Accepted Documents: When all disciplines (SSS, FLS, ACS, EPR) are satisfied, the construction drawings and construction manual and specifications must be stamped for identification by DSA, a copy saved for DSA records, and transmitted back to the Architect of Record. This may be done either with paper documents, or with electronic files.

2.5.1   If the option for sending paper documents to DSA is chosen, the following occurs:

- The architect overnights the signed and sealed (stamped) reproducibles of the plans and the specifications to DSA for stamping and scanning. The architect must note on the transmittal "ORIGINAL DOCUMENTS FOR STAMPING AND SCANNING" on the transmittal to notify the mailroom technician.

- The mailroom technician immediately notifies the Structural Plan Reviewer of receipt of the drawings.

- The Structural Plan Reviewer schedules time for stamping drawings and specifications with the other disciplines, as is done in item Step 2.4.1 above.

- The Structural Plan Reviewer gives the plans to DSA IT for scanning into IMS, and return to the architect.

2.5.2   If the option for transmitting electronic files to DSA is chosen, the following occurs:

• The Architect and all Engineers of Record apply graphics of their seals and signatures to all sheets, and digitally sign the documents in conformance to External Procedure 08-01,

• The Architect uploads these documents to the DSA FTP site.

• The Structural Plan Reviewer downloads the documents and schedules time for electronic identification of the documents with the other disciplines.

• The electronically identified documents are uploaded back to the FTP site for the Architect's download and distribution for bidding and construction.

• The electronically identified documents are transmitted to DSA IT for indexing into IMS.

APPENDICES

1 – Required Documents
2 – Technical Requirements for Electronic Documents
3 – Folder Naming Conventions
4 – File Naming Conventions
5 – Letter from State Architect

APPENDIX 1 - REQUIRED DOCUMENTS:

These requirements apply to documents on a CD.
See the form DSA-3 - Project Submittal Checklist - on the DSA website for more details.

One file of each of the following must be provided. The electronic versions must be identical to the paper versions.

1. The DSA-1 Form: "Application for Plan Review and Approval".

2. The DSA-3 Form: "Project Submittal Checklist".

3. All correspondence regarding the project.

4. The Architect's Transmittal Form covering all the documents submitted.

5. **A complete set of drawings,**
   - All drawings must occur in one file, with bookmarks for each drawing, in the same ordered as is given in the sheet index.

   - Each drawing name ***MUST*** include the ***sheet number and the sheet name***. For Example: "**A2.2.3_Bldg_B_Roof_Plan**"

6. The specifications and construction manual (one file, with bookmarks to each of the sections).

7. Structural calculations (one file, book marked for general, vertical, lateral, foundation and miscellaneous analyses)

8. Input or model files for all structural analysis software used (Risa 3D, Etabs, Etc.).

9. The Test and Inspections List.

10. The Geotechnical Report and Geohazard Report (if required for the project).

11. Title 24 Energy compliance forms and calculations (if required for the project).

12. Fire Alarm Component submittal, and voltage drop calculations. (The Component Submittal must be in one file. The order of the components must follow that of their appearance on the drawings. The components must be properly marked and referenced on the drawings and calculations).

13. The Local Fire Authority's Access, Gates, Hydrants and Fire Flow sign-off drawing, (subsequently referred to as "local sign off")

14. Plumbing cut sheets for Access Compliance, if requested by DSA or provided by the architect.

APPENDIX 2 - TECHNICAL REQUIREMENTS FOR ELECTRONIC DOCUMENTS

A.   FILE FORMATS   All documents shall be submitted in Adobe Portable Document Format (PDF). Drawings shall be electronically converted to PDF from native format and not scanned.

Note: This requirement differs from that in the letter from the State Architect of 10-26-06 (see Appendix 5). The State Architect and DSA Regional Managers have decided to limit the accepted format to PDF in order to simplify the process.

B.   IMAGE SIZE

The size of the electronic image must agree with the standard paper size of the sheet; for example:
   1.   A 30″ x 42″ drawing should not be placed on an 11″x17″ sheet size
   2.   An 11″x17″ image should not be placed on a 30″x42″ sheet size.

All drawings must be submitted in landscape format.

APPENDIX 3 - STANDARD FOLDER NAMING SYSTEM AND CONTENTS:

Projects reviewed electronically will be returned to the architect through DSA's File Transfer Protocol (FTP) server. Profiles and project folders will be created by DSA on behalf of the architect of record, see Section 2 of Bulletin.

DSA FTP SERVER

Contact Name and Firm Name
  0X-10XXXX_PROJECT NAME (Application number_Project Name)

  IN: This folder holds documents received from the architect. File names of document listed in *italics* shall conform to the standard naming system, given in Appendix 4, after an application number has been assigned.

  NOTE: *THE SIXTH TERM WILL NOT BE USED IN THIS FOLDER:*

DSA-1
DSA-3
Architect's Transmittal
Access Gates Hydrants Fire Flow
Any other correspondence
Geotechnical Report
Geohazard Report
Plumbing Cut sheets
Review Drawings (DWG)
Review Specifications (SPEC)
Structural Calculations (STC)
Fire Alarm Component Submittal (FAC)
Energy Compliance forms and calculations(ENG)

  OUT: This folder holds documents created by the Plan Reviewers that are returned to the architect for correction. File names for documents in this folder shall conform to the standard naming system given above ***INCLUDING THE SIXTH TERM***.

Review Drawings (DWG)
Review Specifications (SPEC)
Fire Alarm Component Submittal (FAC)
Energy Compliance forms and calculations (ENG)

APPENDIX 4 - STANDARD FILE NAMING SYSTEM:

This system will be used by DSA to name all documents that may be returned to the architect of record as part of the plan review. The DSA Plan Review Team will rename the files.

The standard file name comprises 6 terms.

EXAMPLE: "O3-107583_INC1_DWG_01_ACS"

First Term:	**O3**:	The **OFFICE** ID.
Second Term:	**107583**:	The **APPLICATION** number
Third Term:	**INC1**:	The **INCREMENT** (if required). If multiple buildings comprise one increment, this may be replaced by a designation for the building, e.g.: **"BLDG-A",** or **"ADMIN".**
Fourth Term:	**DWG**:	The type of **DOCUMENT** comprising the file from a standard list of:
	DWG:	Working Drawings
	SPEC:	Project manual and specifications
	STC:	Structural Calculations
	FAC:	Fire Alarm component submittal
	ENG:	Energy calculations
Fifth Term:	**01**:	The **VERSION**, 01 being first submittal for review, 02 being submittal for backcheck, 03 being further submittal for backcheck, etc.
Sixth Term:	**ACS**:	The DSA section reviewing the document. The plan **REVIEWER** will add this term to the file name when the document is first taken for review:
	ACS:	for Access Compliance
	FLS:	for Fire-Life Safety
	SSS:	for Structural Safety
	ECR:	for Energy Compliance Review.

State of California • Arnold Schwarzenegger, Governor
State and Consumer Services Agency
DEPARTMENT OF GENERAL SERVICES
Division of the State Architect - Headquarters

Date: October 26, 2006

To: **Community College & School District Facility Directors,**
Design Professionals, Construction Managers.

From: **Division of the State Architect, Department of General Services.**

Subject: **Request for Electronic Files for All Project Plans and Specifications**

As part of an overall goal to convert all of the Division of the State Architect's services to a paperless mode by 2011, the Division of the State Architect (DSA) has made a commitment to the development of an electronic plan review (e-plan review) capability. The e-plan review capability will provide design professionals and DSA staff with state-of-the-art tools to assist in the preparation and execution of the required regulatory plan reviews in a consistent, accurate, and timely manner. Additionally, the electronic review of plans will provide DSA with added flexibility in managing its workload distribution statewide.

In order to provide regional managers at DSA with the ability to select projects for e-plan review, DSA is requesting that all new submittals include an electronic file of the project plans and specifications in addition to three hardcopy sets of the plans and specifications. It is preferred that the electronic file of the plans be submitted be in native ".dwg" format; however, electronic files in ".dwf" or ".pdf" formats will also be accepted.

In order to develop this e-plan review capability, each of the four DSA regional offices will conduct several e-plan review pilot projects. These pilot projects provide an opportunity to test the e-plan review procedures and develop working relationships with design professionals on this new mode of plan review. For projects selected for the e-plan review, the district representative and the design professional-in-charge will be notified and, upon their agreement, the project's plan review will be conducted electronically.

If you have any questions regarding this request, please contact Mahendra Mehta at (916) 324-5900 or Mahendra.Mehta@dgs.ca.gov.

Sincerely,

David F. Thorman, AIA
State Architect